

Massachusetts State Energy Program Plan

On May 12th, 2009, the Massachusetts Department of Energy Resources (DOER) submitted a plan to the U.S. Department of Energy (DOE) for the State Energy Program funded through the American Recovery and Reinvestment Act (ARRA). This document provides a summary of the submission.

Massachusetts stands ready to put the full \$54.9 million allocated to the State Energy Program to work quickly and productively. Massachusetts' planned activities build on a long track record on energy efficiency and renewable energy in the public and private sector, going back to the 1980s but invigorated substantially under the leadership of Governor Patrick. As of last year, our clean energy sector was the fastest growing sector in the state with 20% growth over the previous year. Massachusetts' experience and capacity ensures that we will successfully complete the planned activities.

Over the last several months, the DOER received input from a range of public and private stakeholders. This process generated a well-vetted list of \$1.16 billion in energy projects at state facilities. In addition, opportunities of similar scale and scope have been identified in communities and in the private sector.

DOER identified three activities that would maximally stimulate and retain jobs while also leveraging as much private financing as possible; producing energy savings; increasing energy production from renewable resources; reducing greenhouse gas emissions; and delivering energy cost reductions.

- The Massachusetts Building Energy Transformation will fund innovative proposals to solve long-standing building energy challenges.
- The Massachusetts Solar Stimulus will leverage private financing to advance 8 MW of SEP-funded large solar PV along with 5 or more additional MW funded through other programs.
- The Energy Efficiency at State Facilities activity will leverage up to \$290 million in private financing for energy efficiency projects across state facilities.

Additional detail about each activity is below.

In successfully implementing these activities, Massachusetts could create an estimated 4300 jobs and produce substantial reductions in fossil energy use and greenhouse gas emissions, as shown in the following table:

| Program | Job Created/ Retained[^] | Annual Energy Savings (MMBtu) | Annual Energy Production from Renewable Resources (MMBtu) | Annual Reduction in GHG Emissions (metric tons) | Annual Energy Cost Savings |
|---|--|--|--|--|---|
| Massachusetts Building Energy Transformation | 326 | 87,500 | | 8,070 | \$2,187,500 |
| Massachusetts Solar Stimulus | 652 | | 32,290 | 4,260 | \$1,419,120 |
| Energy Efficiency for State Facilities | 3340 | 458,980 | | 42,300 | \$11,474,556 |

[^] Based on simple estimate of one job per \$92,000 of project cost as required by DOE. Differences across activities have to do with anticipated leverage of additional funds for each activity.

Table 1. Summary of Estimated Benefits

Massachusetts Building Energy Transformation

ARRA funds offer the opportunity to demonstrate solutions to a number of long-standing challenges in improving building energy performance and transform future energy efficiency efforts. DOER plans to issue a Request for Responses (RFR) to address one or more of the following challenges:

- Reducing petroleum usage in New England by expanding energy efficiency opportunities to people and businesses who use oil and propane for heating and are not covered by the programs for regulated fuels;
- Demonstrating a deep energy retrofit (DER) strategy at one large building or many smaller buildings, in light of the recent work of the Governor's Task Force on Zero Net Energy Buildings;
- Innovative approaches to financing customer adoption of energy efficiency improvements
- Education, outreach, and mobilization to help people to choose to make energy performance improvements.

DOER plans to evaluate responses with an eye towards scalability and coordination with our existing programs. We also expect respondents to identify other funding sources to leverage SEP funds maximally.

Massachusetts Solar Stimulus

Massachusetts plans to invest in solar photovoltaic energy generation (PV) on public facilities throughout the state, leveraging funds made available under the American Reconstruction and Recovery Act (ARRA) to the greatest extent possible. Through an

Energy Task Force of the Governor's Mobilization Effort conducted in preparation for ARRA, the Commonwealth identified over 13 MWs of roof and ground-mounted PV installation, of which at least 8 MW could be funded through SEP funds and an additional 5 MW through the Green Infrastructure set-aside for the State Revolving Fund for Clean and Drinking Water. (The exact number of projects and capacity that could be funded will depend on the bids received.) In addition, a Municipal Task Force identified a number of additional potentially suitable projects that could be funded through the Energy Efficiency and Conservation Block Grant.

Key principles guiding this effort are:

- rapid deployment of large systems to maximize PV capacity while providing maximum transparency and accountability
- leveraging of federal funds to the fullest extent possible using, where appropriate, 3rd party providers to install and maintain large solar arrays
- obtaining extremely competitive pricing via volume procurements and purchasing and providing fixed long-term electric rates for a number of facilities
- reducing the long-term operating costs of state and municipal facilities
- fostering expansion of the Massachusetts PV industry and create local jobs

Energy Efficiency for State Facilities

The Governor's Energy Task Force identified \$1.16 billion in energy efficiency retrofits and renewable energy projects at public facilities. With limited SEP funds available, we plan to leverage funds maximally by using performance contracts wherever possible.

SEP funds will provide the project management resources required to accelerate retrofits identified considerably, with a plan of initiating work on a 4 year pipeline of performance contracts in 18 months. We expect to leverage over \$290 million in private financing for these projects. In addition, SEP funds will allow us to "buy down" the installed cost of a few innovative technologies with longer payback horizons and roll them into performance contracts.

Finally, we plan to make an investment in advanced meters to ensure that facility energy usage can be monitored and building management updated appropriately. This effort will be coordinated with ongoing centralization of electricity procurement by our state Administration and Finance agency.